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ABSTRACT

This document, which was jointly developed by representatives from a broad cross-section of Ohio's health care industries and educators representing Ohio's schools and colleges, is intended as a foundation for developing an integrated delivery system to prepare students for careers in health care. The document's introductory section presents background information on college tech prep, Ohio's health technology state competency profile, and the Ohio model of health care core standards, along with a key to the profile codes and an overview of the components of Ohio's model tech prep program for health occupations. The remainder of the document presents the Ohio model's 15 units, which cover the following topics: anatomy and physiology; diseases and disorders; communication/technology; organizational systems; employability skills; legal practices; ethics; safety practices; teamwork; health maintenance for providers; health maintenance for individuals/communities; the therapeutic/diagnostic core; the therapeutic cluster; the diagnostic cluster; and the information services cluster. Each unit includes competencies, key competency indicators, the grade level at which each competency should be taught, and ratings of individual competency's importance. The following items are appended: a resource list; lists of the health technology profile review panel members; sample program delivery models and pathway forms; and academic and career cluster integrated technical and academic competencies. (MN)

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Ohio Health Technology Competency Profile

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INTRODUCTION

The Ohio Health Technology Competency Profile developed under the auspices of the Joint Council of the Ohio Board of Regents and the State Board of Education provides a framework for a broad-based educational response to the shortage of health care professionals. The fast-growing health care industry provides more than 300 different careers with preparation required at the professional level, the technical level, and aide or assistant level.

The profile includes health care competencies that are grounded in academic subject areas and built around a health care core and three occupational clusters: Therapeutic, Diagnostic, and Information Services. Generated using the Ohio College Tech Prep model of curriculum development and the Health Care National Skills Standards, the profile reflects the educational pathways, career opportunities, skills and credentials required for Ohio's health care professionals. The profile reflects programming design flexibility, which represents many options for educational studies and career planning.

Representatives from a broad cross-section of Ohio's health care industries played a critical role in defining the vision and scope of health care professionals, and by identifying the essential skills for current and future health care employees. Secondary and post-secondary educators representing Ohio schools and colleges identified essential competencies with proficiency standards met by the attainment of the Associate Degree. The profile identifies continued education and career progression. Ohio's Academic Standards are referenced to reflect higher academic course work in preparation for continued educational studies. Health care's regulatory agencies are referenced as resources for conducting a crosswalk between the profile and program accreditations, industry validated standards, and licensure or certifications. (A list of business/industry representatives and educators participating in the development of the profile and regulatory agency resources appear in the appendices.)

The Ohio Health Technology Profile will be used as the basis for the development of an integrated delivery system that provides opportunities for new and challenging health care programs and courses. Career-Technical Education, College Tech Prep, and post-secondary degree programs will be enhanced and expanded through the use of the Health Technologies curriculum. Samples of delivery models are referenced in Appendix C.

This profile is available on the Internet at: **www.ohtpcs.org**. At this location, users can download copies of the entire profile or conduct searches on a number of key variables.

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COLLEGE TECH PREP

College Tech Prep is a high school and college career path linked to business, industry, and labor that insures a specified seamless pathway from high school to college to careers, meeting Ohio's technological employment needs.

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study.
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available.
- Provides technical preparation in a career field such as engineering technology; applied science; mechanical, industrial or practical art or trade; agriculture; health occupations; business; or applied economics.
- Builds student competencies in mathematics, science, reading, writing, communications, economics, and workplace skills through applied, contextual academics and integrated instruction, in a coherent sequence of courses.
- Leads to an associate or baccalaureate degree or a BAT (Bureau of Apprenticeship Training) apprenticeship requiring a minimum of two years in a specific career field.
- Leads to placement in appropriate employment or to further education.

HEALTH TECHNOLOGY STATE COMPETENCY PROFILE

In recognition of the need for a highly skilled health care workforce, the U.S. Department of Education in 1992 funded the National Health Care Skill Standards Project (NHCSSP). This project was a collaborative endeavor among health services, labor, and the education community to better prepare tomorrow's health care worker by developing skill standards today.

The NHCSSP involved representatives from key constituencies in a comprehensive process of research, review, and revision to ensure that the resulting standards meet the needs of the industry. The standards make explicit the knowledge and skills health care workers need in order to provide quality health care.

The Ohio Health Technology Competency Profile (TCP) is based upon these standards to provide the foundation for better worker preparation, both in school and on the job. The goals of the College Tech Prep educational tract are to provide a seamless transition from secondary to postsecondary health programs, value added curriculum, and educational continuity. This TCP provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers.

Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).

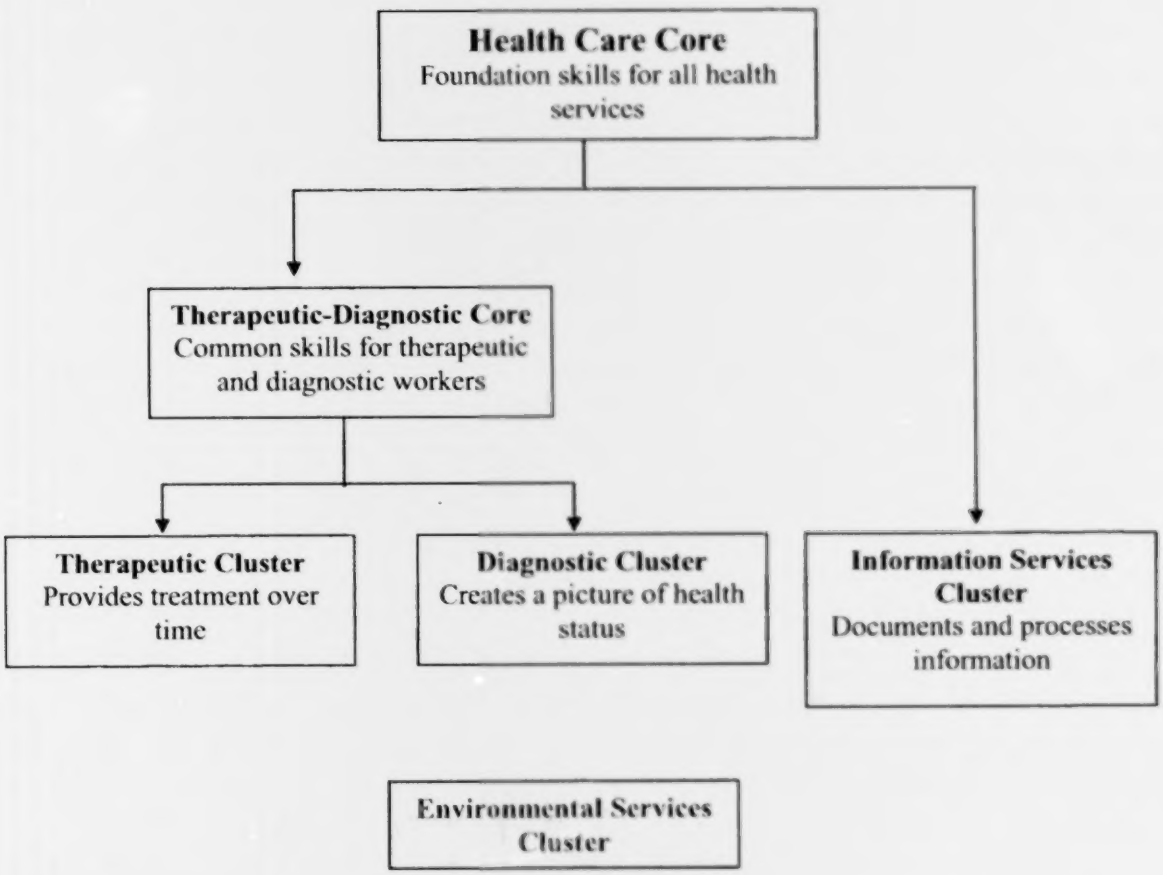
MODEL FOR OHIO HEALTH TECHNOLOGY COMPETENCY PROFILE (TCP)

The competencies in the following Health TCP were developed in accordance with the Health Care Core Standards developed by The National Consortium on Health Science and Technology Education. These standards specify the knowledge and skills that the vast majority of health care workers should have. The health care core standards include:

I.	Academic Foundation	-	Human Structure and Function
		-	Disease and Disorders
II.	Communication	-	Communication Skills
		-	Reporting
		-	Technical Reports
III.	Systems	-	Systems Theory
		-	Health Care Delivery System
		-	Health Care Delivery Systems Results
		-	System Change
IV.	Employability Skills	-	Key Employability Skills
		-	Interpersonal Communication
		-	Personal Growth and Development
		-	Career Decision-Making
V.	Legal Responsibilities	-	Legal Implications
		-	Legal Practices
VI.	Ethic	-	Legal and Ethical Boundaries
		-	Ethical Practices
		-	Cultural, Social, and Ethnic Diversity
VII.	Safety Practices	-	Infection Control
		-	Personal Safety
		-	Environmental Safety
		-	Common Safety Hazards
		-	Emergency Procedure and Protocols
VIII.	Teamwork	-	Health Care Teams
		-	Team Member Participation

In addition to competencies in the above core areas, the later part of the document includes competencies in the following cluster areas: therapeutic/diagnostic (combined), therapeutic, diagnostic, information services (see diagram on the following page). This health profile also encompasses the Health Services Career Cluster Integrated Technical and Academic Competencies (ITAC) (1999) developed by the Vocational Instructional Materials Laboratory with funding from the Ohio Department of Education Division of Career-Technical and Adult Education.

OHIO MODEL OF HEALTH CARE CORE STANDARDS DEVELOPED BY THE NATIONAL CONSORTIUM ON HEALTH SCIENCE AND TECHNOLOGY EDUCATION



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COLLEGE TECH PREP
OHIO HEALTH
TECHNOLOGY COMPETENCY PROFILE

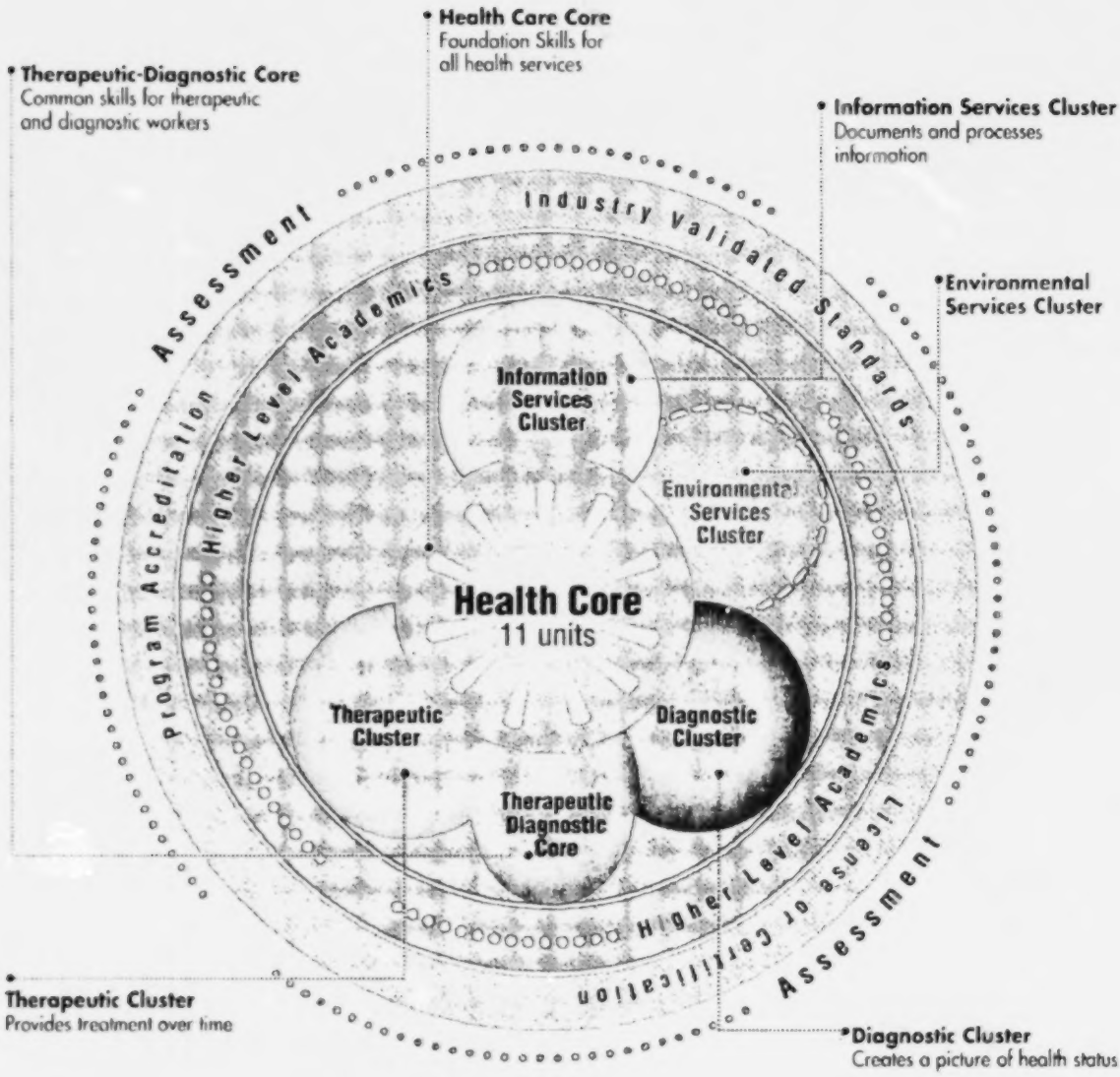
Model Descriptor

The base of the model provides a solid foundation and represents the College Tech Prep Health Career Plan of two years of programming during high school, two years of learning at the Community College Level, and two years of study at the Baccalaureate Level. The points on the base represent education and career progression. The career pathway may occur at any time from high school and continue throughout adulthood and represents principles of life long learning.

Located in the epicenter of the model are 11 components. These components represent the content in the Health Care Core. The 11 components provide the foundation skills essential to all health careers. These concepts are: Anatomy and Physiology, Diseases and Disorders, Communication, Organizational Systems, Employability Skills, Legal Practices, Ethics, Safety Practices, Teamwork, Health Maintenance for the Provider, Health Maintenance for the Individual/Community.

Encompassing the epicenter there are four elliptic circles. Each represents one of the health career clusters. Three of these elliptic circles represent the Health Career Clusters. These are: Information Services Cluster, Therapeutic Cluster, and Diagnostic Cluster. The fourth elliptic circle is superimposed upon the diagnostic and therapeutic cluster. This represents the fact that there are common skills required for the health care careers in these two clusters.

Surrounding the four elliptic circles and the common core are components that provide strength and support to the model. These circles represent: work-based learning, industry-based credentials and industry-validated standards, program accreditation, teacher credentials and contextual academic coursework in language arts, mathematics, sciences, social studies, foreign language, and technology. On the circumference of the model and embracing the model is assessment. The arrows point in each direction and represent the concept of a dynamic process that is ever changing and evolving. This on-going assessment provides strength to the model by ensuring currency of practice and accountability to the individuals in a health career.



Ohio Health Technology

College Tech Prep

Secondary → Associate Degree → Bachelor's Degree

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KEY TO PROFILE CODES

IMPORTANCE OF COMPETENCIES

All of the competencies in this document represent the minimum requirements for a College Tech Prep health program. It is the responsibility of the local consortia to further define and/or expand the key indicators for each competency. Each competency will be taught at either the introductory or proficiency level by the completion of the Tech Prep program, which is the minimum of an Associate Degree.

The intent of this document is to integrate high academics with skill acquisition. Technical skills are a required component. However, the degree of skill acquisition may vary based on the educational setting.

I = **Introduce** (Learner will demonstrate knowledge and comprehension of the competency.)

P = **Proficient** (Learner will demonstrate ability to apply knowledge of and/or perform the competency.)

Grade Level: **12** = by the end of grade 12
AD = by the end of the Associate Degree

All essential competencies have been assigned a P (Proficient) by end of the Associate Degree. [There may be instances where both Introduce and Proficient are at either the 12th grade or the Associate Degree.]

ACADEMIC CONNECTION (AC)

All Tech Prep programs are responsible for meeting the academic content standards that are referenced in the appendix of this document.

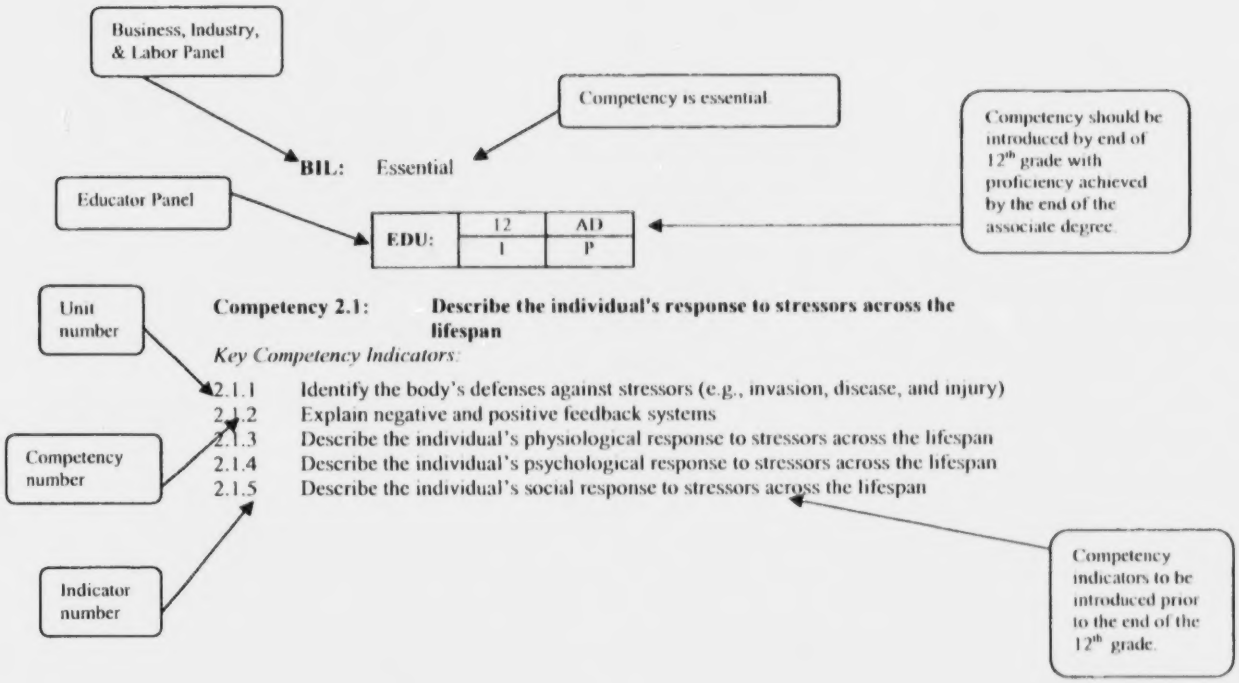
Example:

BIL: Essential

EDU:	**12**	**AD**
	I	P

Competency 1.1: Analyze . . . .
Key Competency Indicators:
Explain . . . .
Identify . . . .

EXAMPLE:


Business, Industry, & Labor Panel
Competency is essential
Competency should be introduced by end of 12th grade with proficiency achieved by the end of the associate degree.
BIL: Essential
Educator Panel
EDU: 12 AD I P
Unit number
Competency 2.1: Describe the individual's response to stressors across the lifespan
Key Competency Indicators:
2.1.1 Identify the body's defenses against stressors (e.g., invasion, disease, and injury)
2.1.2 Explain negative and positive feedback systems
2.1.3 Describe the individual's physiological response to stressors across the lifespan
2.1.4 Describe the individual's psychological response to stressors across the lifespan
2.1.5 Describe the individual's social response to stressors across the lifespan
Competency number
Indicator number
Competency indicators to be introduced prior to the end of the 12th grade.

HEALTH TECH PREP
PROGRAM PROFILE

Page	Unit	
1	1-11	**Health Care Core** **Required for ALL programs**
3	1	Anatomy and Physiology
5	2	Diseases and Disorders
7	3	Communication/Technology
9	4	Organizational Systems
11	5	Employability Skills
13	6	Legal Practices
15	7	Ethics
17	8	Safety Practices
19	9	Teamwork
21	10	Health Maintenance for the Provider
23	11	Health Maintenance for the Individual/Community
		Health Care Career Clusters
25	12	Therapeutic/Diagnostic Core **Required for programs offering Therapeutic and/or Diagnostic Clusters**
Cluster Units: Health clusters offered are decided by the Tech Prep Consortium and local districts based on the educational setting and the career pathway		
29	13	Therapeutic Cluster
37	14	Diagnostic Cluster
47	15	Information Services Cluster

HEALTH CARE CORE

UNITS 1-11

Unit 1: Anatomy and Physiology

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 1.1: **Describe the basic structure and functions of cells, tissues, organs, and systems as they relate to homeostasis**

Key Competency Indicators:

1.1.1 Define homeostasis

1.1.2 Describe basic life functions

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 1.2: **Demonstrate knowledge of human growth and development across the lifespan**

Key Competency Indicators:

1.2.1 Identify developmental tasks for each age group (neonate, infant, child, adolescent, adult, and geriatric)

1.2.2 Identify health issues for each age group (neonate, infant, child, adolescent, adult, and geriatric)

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 1.3: **Compare the interdependence of the body systems**

Key Competency Indicators:
1.3.1 Identify the body systems
1.3.2 Describe the functions of the body systems
1.3.3 Describe the interdependence of the body systems

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 1.4: **Utilize basic medical terminology**

Key Competency Indicators:
1.4.1 Define basic medical terms
1.4.2 Spell basic medical terms
1.4.3 Pronounce basic medical terms

Unit 2: Diseases and Disorders

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 2.1: **Describe the individual's response to stressors across the lifespan**

Key Competency Indicators:

2.1.1 Identify the body's defenses against stressors (e.g., invasion, disease, and injury)
2.1.2 Explain negative and positive feedback systems
2.1.3 Describe the individual's physiological response to stressors across the lifespan
2.1.4 Describe the individual's psychological response to stressors across the lifespan
2.1.5 Describe the individual's social response to stressors across the lifespan

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 2.2: **Compare common categories of diseases and disorders**

Key Competency Indicators:

2.2.1 Classify causes of common categories of diseases and/or disorders
2.2.2 Describe the manifestation of common categories of diseases and/or disorders
2.2.3 Identify potential diagnostic procedures
2.2.4 Summarize traditional and alternative therapies

Unit 3: Communication/Technology

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 3.1: **Demonstrate communication techniques**

Key Competency Indicators:

3.1.1 Practice the appropriate methods of giving and receiving information
3.1.2 Contrast therapeutic and social communications
3.1.3 Identify selected cultural differences that may affect therapeutic and social communication

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 3.2: **Utilize communication technology**

Key Competency Indicators:

3.2.1 Communicate using electronic equipment (e.g., computer, fax, photo copier, internet, phone, printer, etc.)
3.2.2 Access information using electronic equipment

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 3.3: **Analyze the role of technology in the health care industry**

Key Competency Indicators:

3.3.1 Demonstrate knowledge of general technology trends
3.3.2 Identify trends in monitoring devices
3.3.3 Identify trends in diagnostics testing
3.3.4 Identify technology applications that support therapeutic intervention
3.3.5 Select software programs appropriate for identified needs
3.3.6 Utilize a variety of computer applications that support provision of health care education
3.3.7 Manage health care records using selected software program(s)

Unit 4: Organizational Systems

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 4.1: **Investigate various health care system delivery models**

Key Competency Indicators:

4.1.1 Research health care system delivery models

4.1.2 Compare delivery models

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 4.2: **Analyze the interdependence of health care professions within a given health care delivery system**

Key Competency Indicators:

4.2.1 Research the roles of health professionals within a given health care delivery system

4.2.2 Research the scope of practice for each of the health care professions

4.2.3 Describe the contribution of each health care professional within the interdisciplinary health care delivery system

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 4.3: **Investigate factors that may affect various health delivery systems**

Key Competency Indicators:

4.3.1 Identify current trends in health care
4.3.2 Identify current issues in health care
4.3.3 Identify current accreditation agencies and standards

Unit 5: Employability Skills

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 5.1: **Demonstrate employability skills that enhance employment opportunities**

Key Competency Indicators:

5.1.1 Discuss desirable personal and professional attitudes, behaviors, and work habits

5.1.2 Discuss the process and documents needed for obtaining a health care position

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 5.2: **Interact appropriately and respectfully with diverse groups**

Key Competency Indicators:

5.2.1 Recognize the differences associated with diversity and the implications of those differences

5.2.2 Demonstrate appropriate strategies and solutions for dealing with cultural conflicts and differences

5.2.3 Identify age-specific competencies for understanding and working with various age groups

UNIT 5: EMPLOYABILITY SKILLS

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 5.3: **Develop a career plan in each of the following health care services: diagnostic, therapeutic, or information services**

Key Competency Indicators:

5.3.1 Identify educational requirements and availability of educational opportunities for different health professions

5.3.2 Explore specific health care interests (e.g., shadowing, worksite experiences, professional readings)

5.3.3 Research projected growth of various health care careers

Unit 6: Legal Practices

BIL: **Essential**

EDU:	12	AD
	1	P

Competency 6.1: **Perform duties according to regulations, policies, laws, and legislated rights of clients/patients**

Key Competency Indicators:

6.1.1 Explain legal responsibilities, limitations, and implications of actions

6.1.2 Comply with legal responsibilities specified by state practice act(s) and other pertinent legislation

6.1.3 Compare/contrast the roles of various regulatory agencies

BIL: **Essential**

EDU:	12	AD
	1	P

Competency 6.2: **Survey mandated standards in the health care industry**

Key Competency Indicator:

6.2.1 Describe mandated standards for workplace safety, harassment, labor, and employment laws

6.2.2 Identify legal responsibilities specified by state practice act(s) and other pertinent legislation as it relates to mandated reporting of client/family abuse

6.2.3 Identify legal responsibilities specified by state practice act(s) and other pertinent legislation and regulatory agencies as it relates to confidentiality

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 6.3: **Differentiate between licensure, certification, registration, and legislated scope of practice**

Key Competency Indicators:

6.3.1 Describe licensure, certification, registration, and legislated scope of practice

6.3.2 Identify behaviors that violate acceptable practice as outlined by the credentialing agencies

Unit 7: Ethics

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 7.1: **Differentiate between legal and ethical issues**

Key Competency Indicators:
7.1.1 Define "legal"
7.1.2 Define "ethical"
7.1.3 Apply legal and ethical concepts to health care practice

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 7.2: **Practice responsibly within the ethical framework**

Key Competency Indicators:
7.2.1 Identify codes of ethics within the health care profession
7.2.2 Develop an individual ethical framework
7.2.3 Demonstrate ethical behavior when interacting with colleagues both internal and external to the agencies

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 7.3: **Evaluate the implications of medical ethics**

Key Competency Indicators:

7.3.1 Compare/contrast personal, professional, and organizational ethics

7.3.2 Explain the role of the medical ethics committee within the health care organization

7.3.3 Develop strategies to deal with conflict between personal and organizational ethics

Unit 8: Safety Practices

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 8.1: **Survey state and federal regulations concerning safety, health, and protection of the environment**

Key Competency Indicators:

8.1.1 Identify current Occupational Safety and Health Administration (OSHA) regulations
8.1.2 Identify current Environmental Protection Agency (EPA) regulations
8.1.3 Identify current Center for Disease Control (CDC) guidelines
8.1.4 Identify current Nuclear Regulatory Commission (NCR) regulations
8.1.5 Identify current Federal Drug Administration (FDA) regulations
8.1.6 Identify current Clinical Laboratory Improvement Act (CLIA) regulations

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 8.2: **Demonstrate practices that contribute to the creation of a hazard-free, accident-free environment**

Key Competency Indicators:

8.2.1 Follow procedures established to prevent accidents
8.2.2 Handle substances in accordance with Material Safety Data Sheets (MSDS) and other applicable regulatory guidelines
8.2.3 Identify the principles of ergonomics and body mechanics

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 8.3: **Compare disaster plans in a variety of health care settings**

Key Competency Indicators:
8.3.1 Describe different types of disaster plans
8.3.2 Identify procedures to be followed in the event of a disaster

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 8.4: **Complete requirements for First Aid/CPR certification**

Key Competency Indicators:
8.4.1 Maintain first-aid certification
8.4.2 Maintain cardiopulmonary resuscitation (CPR) certification

Unit 9: Teamwork

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 9.1: **Explain the roles and responsibilities of the individual as part of the health care team**

Key Competency Indicators:

9.1.1 Identify the roles and responsibilities of the individual as part of the health care team

9.1.2 Identify attitudes and behaviors that promote positive interaction between members of the health care team

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 9.2: **Perform responsibly as a team member**

Key Competency Indicators:

9.2.1 Organize assignments

9.2.2 Complete assignments in timely and effective manner

9.2.3 Assist other members of the health care team

Unit 10: Health Maintenance for the Provider

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 10.1: **Recognize the psychosocial needs of the health care provider**

Key Competency Indicators:

10.1.1 Identify stresses in the health care profession (e.g., death, dying, staffing shortages, critical incidents)

10.1.2 Express feelings related to being a health care provider (e.g., appropriate forum, at the appropriate time)

10.1.3 Identify coping strategies, resources, and support persons

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 10.2: **Recognize the physiological needs of the health care provider**

Key Competency Indicators:

10.2.1 Describe available preventive health screenings and examinations

10.2.2 Differentiate between healthy and unhealthy behaviors

Unit 11: Health Maintenance for the Individual/Community

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 11.1: **Describe preventive health practices across the lifespan**

Key Competency Indicators:

11.1.1 Identify screening practices and examinations
11.1.2 Describe preventive measure
11.1.3 Identify potential health hazards in lifestyles, life practices, and the physical environment

BIL: **Essential**

	12	AD
EDU:	I	P

Competency 11.2: **Contribute to planning measures for prevention and early treatment of disease**

Key Competency Indicators:

11.2.1 Identify measures that promote wellness across the lifespan
11.2.2 Identify potential health hazards in lifestyles, life practices, and the physical environment
11.2.3 Identify community resources for prevention and management of health problems

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 11.3: **Demonstrate knowledge of nutrition across the lifespan**

Key Competency Indicators:

11.3.1 Demonstrate knowledge of basic nutritional concepts
11.3.2 Demonstrate knowledge of nutritional requirements across the lifespan
11.3.3 Identify regional, cultural, and religious food preferences
11.3.4 Identify safety issues regarding food handling and storage
11.3.5 Develop consumer nutritional health product awareness

THERAPEUTIC/ DIAGNOSTIC CORE

UNIT 12

Unit 12: Therapeutic/Diagnostic Core Competencies

(Required for programs offering Therapeutic and/or Diagnostic Clusters)

BIL: Essential

EDU:	12	AD
	I	P

Competency 12.1: Interact with client/patient

Key Competency Indicators:

12.1.1 Demonstrate the ability to explain planned procedures and goals to clients/patients
12.1.2 Respect clients'/patients' cultural differences
12.1.3 Use facility guidelines to give health care information
12.1.4 Use language appropriate to situation
12.1.5 Identify the different types of information collected
12.1.6 Access resources needed to remove communication barriers (e.g., client/patient with limited English)
12.1.7 Assure privacy and confidentiality
12.1.8 Maintain professional boundaries

BIL: Essential

EDU:	12	AD
	I	P

Competency 12.2: Convey essential client/patient information to appropriate team members

Key Competency Indicators:

12.2.1 Observe and report unsafe environmental conditions
12.2.2 Recognize and report unusual occurrences
12.2.3 Maintain confidentiality
12.2.4 Recognize and report changes in patient's condition

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 12.3: **Demonstrate competency in measuring client/patient vital signs and other indicators of health status within the scope of practice**

Key Competency Indicators:

12.3.1 Measure vital signs and other indicators
12.3.2 Report client/patient vital signs or other indicators of health status
12.3.3 Record client/patient health status according to facility protocol
12.3.4 Provide input to the plan of care

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 12.4: **Apply the principles of proper body mechanics and ergonomics**

Key Competency Indicators:

12.4.1 Demonstrate proper personal body mechanics and ergonomics
12.4.2 Instruct client/patient and family in proper body mechanics
12.4.3 Demonstrate proper positioning and moving of client/patient

THERAPEUTIC CLUSTER

UNIT 13

THERAPEUTIC CLUSTER

Career Cluster Description

This cluster includes careers involved in the treatment and care of those who are in need of health care services. Careers in this cluster focus on the promotion and maintenance of wellness and on the prevention and treatment of physical, mental and emotional disorders of clients.

College Tech Prep Program/Student

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available
- Curriculum competencies are driven by standards of business, industry, accreditation, and/or credentialing agencies
- Creates a career pathway of multiple entry and exit points
- Promotes the seamless pathway from secondary to postsecondary education
- Provides value-added educational experiences
- Provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers

Career Pathways

College Tech Prep is two years of secondary education plus an associate degree. This career pathway correlates to the Tech Prep 2 plus 2 program. Health Technologies Tech Prep can be delivered in a variety of educational settings at career/technical centers, comprehensive school districts, or partnering with the consortia community colleges and universities. Examples of delivery options:

- Satellite programming at an associate school
- Health Academy
- Partnerships with Health Care Providers/Facilities for delivery of technical skills

Health Care Exploration is a component of the health care pathway. This component can be delivered through community service learning projects, job shadowing, internships, mentorships, capstone experience/projects, site visits with guest speakers, and college visits.

Unit 13: Therapeutic Cluster Competencies

(Cluster Units: Health clusters are decided by the Tech Prep Consortium and local districts based on the educational setting and the career pathway)

The student ascertaining the appropriate certificates/credentials associated with the therapeutic cluster program of study determines technical competencies.

Program of Study

Health Care Core:

- Anatomy and Physiology
- Diseases and Disorders
- Communication/Technology
- Organizational Systems
- Employability Skills
- Legal Practices
- Ethics
- Safety Practices
- Teamwork
- Health Maintenance for the Provider
- Health Maintenance for the Individual Community

Therapeutic/Diagnostic Core

Therapeutic Cluster

Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).

Therapeutic Cluster Careers

Secondary	Associate Degree	Bachelor's Degree
Nurse Aide	Licensed Practical Nurse	Physician Assistant
Licensed Practical Nurse	Dental Assistant	Physical Therapist
Dental Assistant	Dental Hygienist	Radiation Therapist
Patient Care Technician	Registered Nurse (ADN)	Registered Nurse (BSN)
Dietary Aide	Dietetic Technician	Occupational Therapist
Medical Assistant	Respiratory Therapy Technician	Respiratory Therapist
Personal Trainer	Physical Therapy Assistant	Speech-Language Pathologist
Home Health Aide	Paramedic	Audiologist
Emergency Medical Technician	Emergency Medical Technician	Athletic Trainer
Veterinary Aide		Registered Dietitian

Professional Careers with education beyond Bachelor's Degree

Dentist	Physician	Veterinarian
Physical Therapist	Nurse Practitioner	Exercise Physiologist
Optometrist	Ophthalmologist	Chiropractor

Listed are one or more credentials a student may ascertain in preparing for careers in the therapeutic cluster.

Credentials

Secondary	Postsecondary
STNA – State tested Nurse Assistant	STNA – State tested Nurse Assistant
LPN – Licensed Practical Nurse	LPN - Licensed Practical Nurse
CPR – Cardiopulmonary Resuscitation	CPR – Cardiopulmonary Resuscitation
First Aid	First Aid
Emergency Medical Technician (Ohio, Age 18 to take exam)	Emergency Medical Technician
Ohio Dental Assisting	Certified Dental Assistant
Registered Medical Assistant	Certified Medical Assistant
Home Health Aide	Respiratory Therapy Technician
Certified Personal Trainer	Certified Personal Trainer
	Registered Nurse

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 13.1: **Utilize appropriate methods of data collection**

Key Competency Indicators:

13.1.1 Identify methods and types of data collected in health care
13.1.2 Differentiate between subjective and objective data
13.1.3 Record and report information
13.1.4 Maintain professional standards in all documentation activities

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 13.2: **Contribute to the development of a plan of care**

Key Competency Indicators:

13.2.1 Identify the purpose of a plan of care
13.2.2 Identify the components of a plan of care
13.2.3 Provide input in the development of plan of care based on the scope of practice

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 13.3: **Implement procedures accurately in support of the** plan of care

Key Competency Indicators:
13.3.1 Demonstrate knowledge of the procedures within the scope of practice
13.3.2 Perform procedures accurately and in a timely fashion

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 13.4: **Evaluate client/patient status within the scope of practice**

Key Competency Indicators:
13.4.1 Use appropriate evaluation methods
13.4.2 Determine client/patient response to procedures/plan of care
13.4.3 Provide input to modify plan of care accordingly

DIAGNOSTIC CLUSTER

UNIT 14

DIAGNOSTIC CLUSTER

Career Cluster Description

This cluster includes careers involved in the performance of tests or evaluations to identify the presence or absence of illness or injury. Careers in this cluster focus on ascertaining the status of body functions and conditions and determining the cause and nature of diseases and disorders.

College Tech Prep Program/Student

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available
- Curriculum competencies are driven by standards of business, industry, accreditation, and/or credentialing agencies
- Creates a career pathway of multiple entry and exit points
- Promotes the seamless pathway from secondary to postsecondary education
- Provides value-added educational experiences
- Provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers

Career Pathways

College Tech Prep is two years of secondary education plus an associate degree. This career pathway correlates to the Tech Prep 2 plus 2 program. Health Technologies Tech Prep can be delivered in a variety of educational settings at career/technical centers, comprehensive school districts, or partnering with the consortia community colleges and universities. Examples of delivery options:

- Satellite programming at an associate school
- Health Academy
- Partnerships with Health Care Providers/Facilities for delivery of technical skills

Health Care Exploration is a component of the health care pathway. This component can be delivered through community service learning projects, job shadowing, internships, mentorships, capstone experience/projects, site visits with guest speakers, and college visits.

Unit 14: Diagnostic Cluster Competencies

(Cluster Units: Health clusters are decided by the Tech Prep Consortium and local districts based on the educational setting and the career pathway)

The student ascertaining the appropriate certificates/credentials associated with the diagnostic cluster program of study determines technical competencies.

Program of Study

Health Care Core

- Anatomy and Physiology
- Diseases and Disorders
- Communication/Technology
- Organizational Systems
- Employability Skills
- Legal Practices
- Ethics
- Safety Practices
- Teamwork
- Health Maintenance for the Provider
- Health Maintenance for the Individual Community

Therapeutic/Diagnostic Core

Diagnostic Cluster

Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).

Diagnostic Cluster Careers

Secondary	Associate Degree	Bachelor's Degree
Emergency Medical Tech (Basic)	Emergency Medical Tech-Paramedic	Cytotechnologist
Phlebotomist	Pharmacy Technician	Computer Tomography
Para Optometric	Radiographer	Histotechnologist
Pharmacy Aide	Medical Lab Technician	Medical Technologist
Surgical Technician	Para Optometric	Nuclear Medicine Technologist
Radiology Aide	Certified Surgical Technician	Radiographer
	Diagnostic Medical Sonographer	
	Nuclear Medical Technician	
	Radiation Therapy Technician	

Professional Careers with education beyond Bachelor's Degree

Pharmacist Radiologist Pathologist Optometrist

Listed are one or more credentials a student may ascertain in preparing for careers in the diagnostic cluster.

Credentials

Secondary	Postsecondary
CPR – Cardiopulmonary Resuscitation	CPR – Cardiopulmonary Resuscitation
First Aid	First Aid
Certified Phlebotomist	Certified Phlebotomist
Emergency Medical Technician (Ohio, Age 18 to take exam)	Emergency Medical Technician
	Certified Surgical Technician

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 14.1: **Plan appropriate steps for implementation of the services**

Key Competency Indicators:

14.1.1 Identify purpose and intent of request (e.g., physician's order, requisition)
14.1.2 Report apparent inconsistency or error in the request to appropriate personnel
14.1.3 Involve appropriate persons in planning

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 14.2: **Prepare the supplies, equipment, and client/patient for procedures, according to facility protocol**

Key Competency Indicators:

14.2.1 Identify and gather equipment necessary for procedures
14.2.2 Routinely maintain and calibrate equipment
14.2.3 Explain procedures and give related information to client/patient

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 14.3: **Perform procedures to create precise and accurate diagnostic data**

Key Competency Indicators:
14.3.1 Use appropriate supplies and equipment
14.3.2 Monitor quality of sample or specimen
14.3.3 Evaluate results of procedure to assure a quality product
14.3.4 Maintain proper documentation of quality assurance procedures

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 14.4: **Evaluate the procedure and results**

Key Competency Indicators:
14.4.1 Analyze results for diagnostic quality
14.4.2 Recognize abnormal results
14.4.3 Use alternative protocol, as needed within established guidelines

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 14.5: **Produce and report results using appropriate communication channels**

Key Competency Indicators:

14.5.1 Use appropriate means to produce reports

14.5.2 Disseminate reports appropriately

INFORMATION SERVICES CLUSTER

UNIT 15

INFORMATION SERVICES CLUSTER

Career Cluster Description

The Information Services Cluster includes careers involved in the management of medical information. Careers in this cluster focus on the compilation, maintenance and retrieval of records, reports and statistical data on clients receiving health services.

College Tech Prep Program/Student

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available
- Curriculum competencies are driven by standards of business, industry, accreditation, and/or credentialing agencies
- Creates a career pathway of multiple entry and exit points
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- Provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers

Career Pathways

College Tech Prep is two years of secondary education plus an associate degree. This career pathway correlates to the Tech Prep 2 plus 2 program. Health Technologies Tech Prep can be delivered in a variety of educational settings at career/technical centers, comprehensive school districts, or partnering with the consortia community colleges and universities. Examples of delivery options:

- Satellite programming at an associate school
- Health Academy
- Partnerships with Health Care Providers/Facilities for delivery of technical skills

Health Care Exploration is a component of the health care pathway. This component can be delivered through community service learning projects, job shadowing, internships, mentorships, capstone experience/projects, site visits with guest speakers, and college visits.

Unit 15: Information Services Cluster Competencies

(Cluster Units: Health clusters are decided by the Tech Prep Consortium and local districts based on the educational setting and the career pathway)

The student ascertaining the appropriate certificates/credentials associated with the diagnostic cluster program of study determines technical competencies.

Program of Study

Health Care Core

- Anatomy and Physiology
- Diseases and Disorders
- Communication/Technology
- Organizational Systems
- Employability Skills
- Legal Practices
- Ethics
- Safety Practices
- Teamwork
- Health Maintenance for the Provider
- Health Maintenance for the Individual Community

Information Services Cluster

Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).

Information Services Cluster Careers

Secondary	Associate Degree	Bachelor's Degree
Admissions Clerk	Medical Records Technician	Medical Records Administrator
Medical Secretary	Medical Information Coordinator	Medical Librarian
Medical Transcriptionist	Coordinator of Review Activities	Manager, Data Entry
Medical Record Coder	Review Processing/Diagnostic Related Groups Specialist	Research Analyst
Health Unit Coordinator	Health Information Coder	Health Information Manager
Claim Processor	Data Coordinator	Clinical Data Systems Manager
Clinical Data Specialist		
Patient Information Coordinator		

Listed are one or more credentials a student may ascertain in preparing for careers in the information services cluster.

Credentials

Secondary	Postsecondary
Certified Health Unit Coordinator	Certified Health Unit Coordinator
	Registered Records Administrator
	Registered Health Information Technologist
	Certified Medical Billing Specialist
	Certified Medical Transcriptionist
	Certified Medical Record Coder

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 15.1: **Prepare information for various qualitative and quantitative purposes**

Key Competency Indicators:

15.1.1 Analyze information for various purposes
15.1.2 Use computer programs to process information
15.1.3 Identify requirements of external agencies (i.e., insurance companies, courts, and regulatory bodies)

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 15.2: **Extract required information from the medical record**

Key Competency Indicators:

15.2.1 Locate information in the record for various purposes (i.e., filing, coding, or information processing)
15.2.2 Recognize standardized coding systems and uniform data definitions
15.2.3 Performs data entry of narrative information

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 15.3: **Describe the sources, routes, and flow of information within the health care environment**

Key Competency Indicators:

15.3.1 Verify that system information is accurate and complete

15.3.2 Ensure data security and confidentiality by controlling access and release of information

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 15.4: **Identify the content and multiple uses of health information**

Key Competency Indicators:

15.4.1 Describe the components of the health record

15.4.2 Follow legal aspects and regulations of documentation in requests for information

15.4.3 Transcribe health information

15.4.4 Prepare various reports

BIL: **Essential**

EDU:	12	AD
	I	P

Competency 15.5: **Enter, retrieve, and maintain information**

Key Competency Indicators:

15.5.1 Select and use appropriate automated system for the task

15.5.2 Maintain filing, storage, and retrieval systems

APPENDICES

Appendix A

RESOURCE LIST

Dental Board, Ohio State
Vern Riffe Center
77 South High Street, 18th Floor
Columbus, OH 43215-6135
614-466-2580
www.state.oh.us/den
Contact for: Dental Assistant, Dental Hygienist, Dental Lab Technician

Dietetics, Ohio Board of
Vern Riffe Center
77 South High Street, 18th Floor
Columbus, OH 43215-6119
614-466-3291

Education, Department of
Career-Technical & Adult Education
Health Careers
Joyce Boudreau, Consultant
25 South Front Street
Columbus, OH 43215-4183
614-466-3430

Fastrak ITAC
Located on the Ohio Department of Education website:
www.ode.state.oh.us/ctae

Health, Department of
246 North High Street
P.O. Box 118
Columbus, OH 43215
614-466-3543
Contact for: TCEP - Training Competency Evaluation Program for STNA

Nursing, Board of
17 South High Street, Suite 400
Columbus, OH 43215-3413
www.state.oh.us/nur
Contact for: Practical Nursing, Associate Degree Nursing, Bachelor of Science in Nursing, Dialysis Technician

Occupational Therapy, Physical Therapy and Athletic Trainers Board
Vern Riffe Center
77 South High Street, 16th Floor
Columbus, OH 43266-0317
614-466-3774

Ohio Department of Aging
LeVeque Tower
50 West Broad Street, 9th Floor
Columbus, OH 43215-3363
614-466-5500
Contact for: Home Health Aide

Ohio League of Nursing
20545 Center Ridge Road, Suite 205
Rocky River, OH 44116
440-331-2721

Ohio Optometric Association
250 East Wilson Bridge Road
Columbus, OH 43085
614-781-0708

Ohio Respiratory Care Board
Vern Riffe Center
77 South High Street, 18th Floor
Columbus, OH 43266-0777
614-752-9218
www.state.oh.us/rcb

Optometry, State Board of
Vern Riffe Center
77 South High Street, 16th Floor
Columbus, OH 43266-0317
Toll Free 888-565-3044

Program Accreditation Information:
AAMA - American Association of Medical Assistance
CAAHEP - Commission on Accreditation of Allied Health Education Programs
NLNAC - National League for Nursing Accrediting Commission

Public Safety, Department of
Division of Emergency Medical Services
1970 West Broad Street
P.O. Box 182081
Columbus, OH 43223-1102
Toll Free 800-233-0785

Appendix B

HEALTH TECHNOLOGY PROFILE REVIEW PANELS

FOCUS GROUP
January 29, 2001

Purpose:	To determine the academic structure of the Health TCP.
Participants:	**David Collins**, Dean, Allied Health Technologies, Sinclair Community College
	Christine Genovese, Bowling Green State University - Firelands
	Charlet Grooms, Nursing Education Consultant, Liaison Member, Board of Nursing
	Gingy Harshey-Meade, CEO, Ohio Nurses Association, Ohio Nurses Foundation, Health Pro Network
	Jan Hinkle, Dean of Nursing, Marion Technical College
	Frederick Law, Lakeland Community College
	Jane F. Mahowald, Executive Director, Ohio League of Nursing
	Lynne Peterson, Associate Dean, Hocking College
	Judy Rayburn, Assistant Dean, Curriculum & Instruction; Chair, Allied Health & Public Service' Acting Chair, Engineering, Central Ohio Technical College
	John Thornton, Dean, Health Technologies, Stark State College of Technology
	Molly Weiland, Dean, School of Health & Nursing, Hocking College

FUTURING PANEL
February 6, 2001

Purpose:	To define vision and scope of health and identify critical occupational areas.
Participants:	**Amy Bennett,** Assistant Executive Director, Ohio Pharmacists Association

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Louise Conway, Dietetic Program Director, Columbus State Community College

Richard Cornett, CEO, Ohio Optometric Association

Allen Fabian, Assistant Director, Technical Training, Roxane Laboratories

Tom Greene, Vice President, Human Resources, Medical Mutual of Ohio

Kerry Loeffler, Vice President, Greater Cincinnati Health Council

Carrie McCarter, Program Manager, OSU Adult Day Program

Joe Ruggles, Vice President, Member Development, Ohio Hospital Association

Lori Shealy, Board of Directors, Ohio Health Information Management

John Smalley, Director of Human Resources, Southeastern Ohio Regional Medical Center

Linda L Wagner, Manager, Employee Education, Grant-Medical Center/Riverside Methodist Hospital

J. C. Wallace, Ohio Department of Development

ISSUE RESOLUTION PANEL

April 2, 2001

Purpose: To resolve several concerns related to the structure and content of the new health profile.

Participants:

Mr. Richard Cornett, CEO, Ohio Optometric Association

Ms. Charlet Grooms, Nursing Education Consultant, Liaison Member, Board of Nursing

Ms. Gingy Harshey-Meade, CEO, Ohio Nurses Association, Ohio Nurses Foundation, Health Pro Network

Ms. Jan Hinkle, Dean of Nursing, Marion Technical College

Dr. Carolyn Laemmle, Assistant Dean, Health Technologies, Cincinnati State Technical & Community College

Ms. Jane F. Mahowald, Executive Director, Ohio League of Nursing

Ms. Barbara D. McCarren, Quality Support, Great Oaks Institute of Technology & Career Development

Ms. Carrie McCarter, Program Manager, OSU Adult Day Program

Ms. Polly Owen, Chairperson, Nursing & Related Services, Columbus State Community College

Ms. Lynne Peterson, Associate Dean, Hocking College

Dr. Judith D. Rayburn, Assistant Dean, Curriculum & Instruction; Chair, Allied Health & Public Service; Acting Chair, Engineering, Central Ohio Technical College

Ms. Jennie Royer, Tech Prep Director, Stark County Tech Prep Consortium

Ms. Sandy Rudawsky, Vice President, Patient Care Services, Berger Health Systems

Mr. Joe Ruggles, Vice President, Member Development, Ohio Hospital Association

Mr. John Smalley, Director, Human Resources, Southeastern Ohio Regional Medical Center

Ms. Kathy Sommers, Program Coordinator, Wayne County Schools Career Center

Mr. John Thornton, Dean, Health Technologies, Stark State College of Technology

Ms. Linda L. Wagner, Manager, Education Services, Grant Medical Center/Riverside Methodist Hospital

Ms. Molly Weiland, Dean, School of Health & Nursing, Hocking College

BUSINESS/INDUSTRY/LABOR REVIEW PANEL

May 2, 2001

Purpose: To identify essential and recommended skills for health professionals.

Participants: **Ms. Dala DeWitt,** Director, School of Nursing/Education, Community Hospital

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Mr. Allen Fabian, Associate Director, Operations Training, Boehringer-Ingelheim, Roxane Laboratories, Inc.

Ms. Rosemary Feka, Nurse Educator, Bureau of Children with Medical Handicaps, Ohio Department of Health

Ms. R. Ann Fitzgerald, Director of Leadership Development & Career Resource Center, Humility of Mary Health Partners

Mr. Mike Flugge, Enforcement Officer, Ohio State Dental Board

Ms. Charlet Grooms, Nursing Education Consultant, Liaison Member, Board of Nursing

Ms. Mandy Haiber, Licensed Optician, Certified Paraoptometrist, Ohio Optometric Association

Ms. Jani Hendrix, Leadership Trainer/Coordinator, Aetna US Health Care

Mr. Paul Laemmle, Retired, Vice President, Laboratory Services, The Health Alliance

Mr. William S. Lee, Deputy Director of Employee Services, Ohio Department of Health

Mr. Christopher H. Logsdon, Executive Director, Ohio Respiratory Care Board

Ms. Jane F. Mahowald, Executive Director, Ohio League of Nursing

Ms. Cathy Moore, RN, Nurse Educator, VA Medical Center

Ms. Kathy Phillips, Enforcement Officer/Investigator, Ohio State Dental Board

Mr. Louis Pomerantz, Ohio Department of Health

Ms. J. Erin Riehle, Director, Project Search, Children's Hospital Medical Center

Ms. Rita Snyder, Regional Director of Accreditation, Mercy Health Partners

Ms. Kaye J. Vahalik, RHIA, Independent Health Information Consultant

Ms. Linda L. Wagner, Manager, Employee Education Services, Grant Medical Center/Riverside Methodist Hospital

Ms. Rebecca Zechman, Director of Education Services, Pro Medica Health System

TECHNICAL EDUCATOR REVIEW PANEL

May 2, 2001

Purpose: To identify when and to what depth essential and recommended health skills should be addressed.

Participants:

Ms. Jennifer Barr, MT, M.Ed., CMA, Allied Health Tech Prep Coord., Sinclair Community College

Kay Biggs, CMA, Coordinator, Medical Assisting, Columbus State Community College

Mr. John Blauch, RN, EMT-P; Instructor, Allied Health Tech, Auburn Career Center

Mr. James Byrne, BS, RT (R), Coordinator, Radiography, Columbus State Community College

Ms. Julie Gill, RT Program Director & Assistant Professor, Muskingum Area Technical College

Ms. Rebecca Grace, Medical Instructor, Licking County Joint Vocational School

Dr. Karen J. Hale, Dept. Chair, Technical Education; Instructor, Medical Technologies, Mayfield Excell TECC

Ms. Vicki J. Huntsman, Asst. Professor, Medical Laboratory/Chemistry, Muskingum Area Technical College

Ms. Loxie Kistler, Academic Director, Allied Health, University of Cincinnati Clermont

Dr. Carolyn Laemmle, Assistant Dean, Health Technology, Cincinnati State Community College

Ms. Janell Lang, Dean, Health Technologies, Owens Community College

Ms. Keri Latham, Medical Assisting Instructor, Wayne County School Career Center

Ms. Myrna Little, Instructor, Allied Health Technology, U. S. Grant Career Center

Ms. Anne Loochtan, Chairperson, Allied Health, Columbus State Community College

Ms. Barbara D. McCarren, Quality Support, Great Oaks Institute of Technology & Career Development

Ms. Ruth Ann Ravenna, Clinical Science I Instructor/Clinical Coord., Cincinnati Public Schools, Hughes Center

Ms. Robin Schoonover, Instructor, Health Tech Prep, Buckeye Hills Career Center

Ms. Karen Short, Director, Practical Nursing, Northwest State Community College

Ms. Kathy Sommers, Program Coordinator, Wayne County Schools Career Center

Dr. Janis Thompson, Instructor of Biology, Lorain County Community College

Ms. Mary Van Sickle, Supervisor, Health Technology, Pickaway-Ross JVSD

Ms. Jill Vanuch, Instructor, JVS Springfield-Clark County

Ms. Lyne Walby, Medical Tech Prep Instructor, Vanguard Tech Prep

Ms. Karen Weck, Medical Technologies Program Coordinator, Millstream CTC, Findlay City Schools

TECHNICAL WRITING TEAM

May-July, 2001

Purpose:

Participants:

Joyce Boudreau, Facilitator, Consultant, Health Careers Education, Career-Technical & Adult Education, Ohio Department of Education

Carolyn Laemmle, Assistant Dean, Health Technologies, Cincinnati State Technical & Community College

Barbara D. McCarren, Quality Support, Great Oaks Institute of Technology & Career Development

J. Erin Riehle, Director, Project Search, Children's Hospital Medical Center

Kathy Sommers, Program Coordinator, Wayne County Schools Career Center

Mary Van Sickle, Supervisor, Health Technology, Pickaway-Ross Joint Vocational School District

STAKEHOLDER REVIEW PANEL

November 2, 2001

Purpose: To refine Ohio Health Technology Competency Profile through dialogue among all stakeholders.

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Appendix C

SAMPLE PROGRAM DELIVERY MODELS

(Incorporate appropriate academic coursework)

Delivery Models Examples

Example 1:

Junior Year:	Core Units 1-11
Senior Year:	1st Semester - Unit 12: Therapeutic/Diagnostic Core and Therapeutic & Diagnostic Clusters
	2nd Semester - Internships in Therapeutic/Diagnostic Cluster
Post-Secondary:	Specialization area
	Diagnostic: Rad Tech or Med Lab
	Therapeutic: PN, ADN

Example 2:

Junior Year:	Core Units 1-11
Senior Year:	1st Semester - Information Services Cluster
	2nd Semester - Internships in Information Services Cluster
Post-Secondary:	Specific to H.I.T.

Example 3:

Junior Year:	Core Units 1-11
Senior Year:	Unit 12: Therapeutic/Diagnostic Core and all three (3) clusters offered as choices:
	Diagnostic Cluster: Medical Assisting, Dental Assisting
	Therapeutic Cluster: LPN, Sports Medicine, Pre-Nursing
	Information Services: Health Unit Coordinator, Medical Transcriptionist
Post-Secondary:	Choose specialization to the cluster area

Example 4:

Junior Year:	1st Semester - Units 1-11
	2nd Semester - Unit 12: Therapeutic/Diagnostic Core
Senior Year:	More specialized area such as Dental Assisting, Phlebotomy, EMT and an Internship

Example 5:

Junior Year:	Core Units 1-11
Senior Year:	Unit 12: Therapeutic/Diagnostic Core and all three (3) clusters offered with job shadowing. Internships required during the last quarter.
Post-Secondary:	Specialization area of interest

Appendix D

SAMPLE PATHWAY FORMS

Sample forms on the following pages are templates used in determining the seamless pathway for programs.

Appendix E

ACADEMIC AND CAREER CLUSTER ITACs

Health Services Career Cluster ITAC (Integrated Technical & Academic Competencies) consists of the foundational competencies common to health occupations. They provide a broad foundation for entry-level, technical and professional careers. ITACs are available from the Vocational Instructional Materials Laboratory at the Center on Education and Training for Employment, The Ohio State University, Columbus, Ohio, 1-800-848-4815, www.cete.org/products

Fastrak (Specialization) ITACs consists of competencies critical to success in a specific health occupation. These are available from the Ohio Department website at www.ode.state.oh.us/ctae.

Recommended Academics. The Health Stakeholders Panel recommended the following academic coursework in preparing for secondary graduation requirements and successful completion of a Tech Prep Health Care program. Availability of academic course offerings may require alternatives such as post-secondary options or distance learning. Secondary graduation requirements are:

- English Language Arts - four years;
- Math - three years recommended Algebra completed by end of tenth grade;
- Science - 3 years with recommended Biology, Chemistry, and Physics;
- Social Studies - recommended basic Economics/Social Studies, U.S. History, and Government;
- Foreign Language and Comprehensive Arts - should be completed by the end of the tenth grade; and
- Electives - such as, Physical Education and Health, should be completed by the end of tenth grade.

Ohio Academic Performance Objectives

The Ohio Health Technical Competency Profile requires rigorous academic preparation so all students will achieve the academic performance objectives established by the Ohio Department of Education. A listing of sample academic performance objectives follow on pages 77-80. For a more detailed explanation of the Ohio Academic Objectives contact:

Karen Paschal
Document Resource Center
Ohio Department of Education Bookstore
25 South Front Street
Columbus OH 43215
Website: www.ode.state.oh.us
Email: kpachal@ode.state.oh.us
Phone: 614-728-3471
Fax: 614-752-3956

Please request documents by the following titles:

Model Competency-Based Mathematics Program

Science: Ohio's Model Competency-Based Program

Model Competency-Based Language Arts Program

Social Studies: Ohio's Model Competency-Based Program

Comprehensive Arts Education: Ohio's Model Competency-Based Program

Foreign Languages: Ohio's Model Competency-Based Program

The Ohio Academic Content Standards are under revision. Language Arts and Math have been adopted by the Ohio Board of Education and will be posted on the website at www.ode.state.oh.us

Ohio Academic Performance Objectives

Mathematics Performance Objectives

11th Grade

Student will be able to …

1. Analyze the effects of parameter changes on graphs
2. Develop and use vectors to represent direction and magnitude including operations
3. Describe and use the inverse relationship between functions including exponential and logarithmic
4. Design a statistical experiment to study a problem, conduct the experiment, and interpret and communicate the outcomes

College-intending student will be able to …

1. Understand the connection between trigonometric and circular functions
2. Solve trigonometric equations and verify trigonometric identities graphically and analytically
3. Analyze properties of Euclidian transformations and relate translations to vectors
4. Further development understanding of axiomatic systems by investigating and comparing various geometries
5. Make arguments concerning limits, convergence and divergence in contexts involving sequences, series, and other types of functions
6. Examine complex numbers as zeros of functions
7. Translate verbal statements into symbolic language
8. Simplify algebraic expressions
9. Use the laws of exponents
10. Describe, in general terms, the normal curve and use its properties

12th Grade

Student will be able to …

1. Model real-world phenomena with a variety of functions
2. Understand the concept of random variable

College-intending student will be able to …

1. Explore recursive functions using spreadsheets and/or programming languages
2. Develop and communicate arguments about limit situations
3. Use matrices to describe and apply transformations
4. Develop and use polar and parametric equations to represent problem situations
5. Explore proofs by mathematical induction
6. Apply the concept of a random variable to generate and interpret probability distributions, including binomial, uniform, normal, and chi square

Science Performance Objectives

11th Grade

1. Collect and interpret data utilizing various sources and techniques on an event or phenomenon that occurs over a period of time
2. Given a set of learner-collected data concerning the transformations of matter and energy
3. Design an investigation of a natural phenomenon
4. Propose practices to minimize potential hazards and risks to inhabitants
5. Develop an evidence-based position regarding a scientific issue
6. Demonstrate an understanding of the concept of entropy by applying the concept to describe the effects of interactions and transformations on the structure and function of living and nonliving systems

12th Grade

1. Given contradictory observations of a phenomenon
2. Demonstrate understanding of a model of a concept or phenomenon
3. Demonstrate the use of a standard classification system to accurately predict properties, interactions, and analyze data
4. Construct and present a summary of human impacts on the environment when provided with data collected from the area

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5. Implement a plan for the management of a system over a period of one month or more
6. Relate the impact of historical scientific discoveries to the issues confronting contemporary society
7. Demonstrate an understanding of the overarching organization in the universe

Language Arts Performance Objectives

11th Grade

Reading

1. Respond in writing, demonstrating an acceptable level of understanding of the materials
2. Demonstrate comprehension
3. Identify, locate, and use information from libraries and other sources
4. Generate interpretations using background knowledge and literary elements to determine responses

Writing

1. Generate writing appropriate for the purpose of narration that demonstrates competence in the development of content and use of language
2. Generate writing appropriate for the specified purpose of exposition that demonstrates competence in the development of content and use of language
3. Generate writing appropriate for the purpose of persuasion that demonstrates competence in development of content and use of language
4. Demonstrate competence in the application of mechanics

Listening/Visual Literacy

1. Demonstrate appropriate grade-level listening/viewing skills by listening to/viewing a variety of media
2. Demonstrate the ability to identify interrelationships among ideas expressed or implied and the organizational patterns of spoken messages
3. Demonstrate the ability to listen to at least two points of view on the same topic and prepare a report or presentation incorporating both perspectives
4. Demonstrate the ability to follow a set of complex directions stated orally

Oral Communication

1. Demonstrate the ability to reassess choices and strategies used in a speech, based upon feedback provided by members of the class, and outline an alternative speech based upon the feedback and reassessment
2. Demonstrate the ability to prepare written manuscripts and notes for speaking
3. Demonstrate the ability to use logical steps for developing a point when speaking or giving a presentation
4. Demonstrate appropriate grade-level oral communication skills

12th Grade

Reading

1. Respond in writing, demonstrating an acceptable level of understanding of the material
2. Demonstrate comprehension
3. Identify, locate, and use information from libraries and other sources
4. Respond to a variety of texts, including complete works, by generating interpretations using background knowledge and literary elements to determine responses

Writing

1. Generate writing appropriate for the purpose of narration that demonstrates competence in the development of content and use of language
2. Generate writing appropriate for the specified purpose of exposition that demonstrates competence in the development of content and use of language
3. Generate writing appropriate for the purpose of persuasion that demonstrates competence in development of content and use of language
4. Demonstrate competence in the application of mechanics
5. Make an appropriate selection and analyze the selection

Listening/Visual Literacy

1. Demonstrate appropriate grate-level listening/viewing skills by listening to/viewing a variety of media
2. Demonstrate the ability to decode a speaker's use of figurative language

3. Demonstrate the ability to evaluate evidence used in a presentation
4. Demonstrate the ability to identify and describe cultural images, myths, and values appealed to in everyday persuasive efforts and media presentation

Oral Communication

1. Demonstrate appropriate grade-level oral communication skills
2. Demonstrate the ability to use figurative language appropriately
3. Identify major attitudes, needs, values, and demographic characteristics of the class and use them to suggest how a profile of the class can be developed as a potential persuasive target

Comprehensive Arts Performance Objectives

11th Grade

1. Create or perform a body of work which contains and reflects exploration, experimentation, and development
2. Present his/her own portfolio of work in terms of existing and recurring ideological themes, images, symbols, styles, and/or technologies
3. Select a local arts event, work, structure, organization, or institution and judge its merit in terms of artistic, economic, social, political, and environmental aspects

12th Grade

1. Develop and present a public exhibition or performance of personal work which represents the evolution of creative and critical thinking and the individual contributions to the arts form and subject it to an authentic review

and/or

2. Organize a collection of personal art work, use specific criteria and/or evidence to identify its philosophical focus, stylistic features, and overall emphasis, and subject it to an authentic review
3. Create a presentation strategy to implement a class/community defined arts project

Social Studies Performance Objectives

11th Grade

1. Project how other choices made in those instances would have different consequences for today
2. Identify ways to deal with their manifestations
3. Use an historical or current event to illustrate the intended or unintended impact of technology on the environment
4. Prepare a personal or family budget and analyze the opportunity costs or trade-offs involved in budget decisions
5. Indicate factors influencing demand for and supply of the good or service
6. Analyze governmental actions in terms of the fundamental principles of American democracy and evaluate the extent to which the actions reflect the principles
7. Outline a plan, along with its costs and benefits, to participate in the governmental process and advance the interests of a particular group

12th Grade

1. Demonstrate an ability to solve problems by being able to conduct research, develop alternative strategies, determine the strategy most likely to result in a successful resolution, communicate with appropriate people, act on the strategy determined to resolve the issue, and evaluate the impact of the strategy undertaken
2. Demonstrate the ability to use knowledge and skills from appropriate social studies disciplines in researching and developing solutions to the issue
3. Demonstrate an ability to consider various perspectives when researching and developing solutions to the issue
4. Propose alternative solutions to problems associated with the issue

Foreign Languages Performance Objectives

11th Grade

1. Write and participate in a dialog that questions and explains features of American culture that may be misunderstood by people in the target culture(s)
2. Research authentic texts and write a report about similarities and differences between attitudes and behaviors of adolescents in the home and target cultures
3. Prepare a display and orally present information about commercial trade patterns between the home and target cultures
4. Obtain information from people of the target culture(s) who have immigrated to the United States, and report on their experiences/feelings in the new culture
5. Prepare a written report that compares practices and beliefs in the home and target cultures relating to health and healthy life styles
6. Share information about the project as a member of a panel presentation
7. Prepare and present a media presentation to "teach a class" about an historical period in the target culture(s)
8. Design and conduct a survey to be completed by people who speak the target languages which focuses on how people in the target culture(s) view the role of the United States in the world arena; the learner will then analyze and report on the results of the survey

12th Grade

1. Write a report giving examples of how media and texts in the target language reflect patterns of behavior, beliefs, and attitudes
2. Collaborate in the planning and presentation of a dramatization that illustrates humor and satire in the target culture(s)
3. Participate in a debate in which a current event/issue is discussed from the perspectives of people in the target and home cultures
4. Make a oral presentation about a specific time in history focusing on events that took place in both the local and target cultures
5. Gather information from various sources and prepare a written report which compares a social issue of peers in the target and home cultures
6. Participate in a panel presentation and share viewpoints/opinions about the text/film
7. Communicate with peers in the target country and exchange information/ideas/opinions relating to common societal issues
8. Participate in a mock job interview for a position in which proficiency in the target language is an asset

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